

REMARKS

Claims 1, 3-12, 14-22, 24-28, and 30-31 are pending in the application.

Claims 33-37 have been withdrawn.

Claims 1-12 and 14-32 have been rejected.

Claims 1, 5-8, 10, 14-18, 22, and 30-31 have been amended. No new matter has been added.

Claims 2, 23, 29, and 32 have been canceled.

Rejection of Claims under 35 U.S.C. §101

Claims 31-32 stand rejected under 35 U.S.C. §101 because the claimed invention is purportedly directed to non-statutory subject matter. Applicants respectfully traverse this rejection.

The basis for the rejection appears to be that the specification describes carrier waves traveling over media such as airwaves, optical lines, electrical lines, and the like. However, claims 31-32 are not directed to and do not read on media that transport carrier waves. Instead, claims 31-32 are explicitly directed towards storage media. Storage media is clearly not a media that transports carrier waves.

Furthermore, nowhere in the cited portion of the specification is a computer readable medium (or a computer readable storage medium, as explicitly recited in claims 31-32) defined as including carrier waves. Instead, the cited portion of the specification merely notes that the invention can also be embodied in such a carrier wave. Accordingly, Applicants respectfully submit that these claims do recite statutory subject matter and request the withdrawal of this rejection.

Rejection of Claims under 35 U.S.C. §102(e)

Claims 14, 23-24, 26-28, and 30-32 stand rejected under 35 U.S.C. §102(e) as being anticipated by Shinomiya (USPPN 2003/0037165) (“Shinomiya”).

As amended, claim 14 recites extending a first data plane of the master switch to include a second data plane of the slave switch according to communication between the master switch and the slave switch via the virtual switch link protocol. This feature is neither taught nor suggested by the cited art.

In the rejection of claim 23, set forth on page 4 of the Office Action, paragraphs 182-186 of Shinomiya are cited as teaching extending a first data plane of the master

switch to include a second data plane of the slave switch. The cited paragraphs of Shimomiya recite:

[0182] In FIG. 14, there is shown a system configuration, in which a substitution server 6 is provided for substituting to perform the related processing by master server 3-1. This server 6 is required to provide a function related to virtual router 3 for distributed processing, as well as a function related to ICMP (Internet Control Message Protocol), which is treated as a special router constituting virtual router 3.

[0183] An operation flowchart performed by substitution server 6 being provided for substituting for the processing by master router 3-1 is described referring to FIG. 15.

[0184] Substitution server 6 is required to register in advance as one of the routers constituting virtual router 3. Substitution server 6 is registered using an identification number which indicates a router condition as a server for substitution.

[0185] Master router 3-1 transmits an advertisement packet as in the case of the ordinary VRRP. Also, responses to the advertisement packet are transmitted from both substitution server 6 and backup router 3-2 in the same manner as that in the ordinary case. Packets are transmitted and received periodically as shown in bold lines (procedure P20, P21) as ordinary VRRP advertisement packets in the previous method, so as to confirm normal operations of each other.

[0186] On receipt of an advertisement packet from master router 3-1 to confirm the operation of virtual router 3, substitution server 6 transmits a packet to end systems 1-1 to 1-4 and 1-5 to 1-6 for requesting information (procedure P22). Each end system responds to substitution server 6. Such processing is identical to the processing performed by only routers 3-1 and 3-2 shown in FIG. 12.

The above quoted paragraphs do not appear to be related to data plane processing or extending the data plane of one switch to another. Instead, the above paragraphs seem to be concerned with adding a substitution server that offloads allocation processing from router 3-1. Nothing in the above paragraphs suggests that the data plane of any device be extended to another, let alone that such an extension is according to communication via a virtual switch protocol. For at least the foregoing reasons, claim 14 is patentable over the cited art, as are dependent claims 24 and 26-28. Claims 30-31 are patentable over the cited art for similar reasons.

Rejection of Claims under 35 U.S.C. §103(a)

Claims 1-2, 4-6, 8-11, 15-22, and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya in view of Walsh et al. (USPPN 2003/0037165) (“Walsh”).

As amended, claim 1 describes a virtual switch that includes a master distribution switch chassis, which in turn includes a first master distribution switch port configured for communication with a slave distribution switch chassis over a virtual switch link, wherein the master distribution switch chassis and the slave distribution switch chassis communicate according to a virtual switch link protocol for logically extending a data plane of the master distribution switch chassis to that of the slave distribution switch chassis. This feature is neither taught nor suggested by the cited art.

The rejection of claim 2, set forth on page 7 of the Office Action, relies upon paragraphs 45-46 of Shinomiya to teach that the master chassis and slave chassis communicate according to a virtual router redundant protocol (equated with the virtual switch link protocol of claim 1) “for logically extending a data plane of the master chassis (3-1) to that of the slave chassis (3-2),” citing paragraphs 45-46 of Shinomiya.

The cited paragraphs of Shinomiya state:

[0045] On the other hand, in a system where VRRP is introduced, a priority is assigned in each router 3-1, 3-2. Here, higher priority is assigned to the router which is given a real address identical to the IP address of virtual router 3. This router functions as a master router performing real routing processing. As an example, it is assumed that router has high priority, and therefore is assigned as a default master router.

[0046] Router 3-1 assigned as the master router transmits an advertisement packet indicating the router itself being the master router to the whole routers except router 3-1 itself which constitute virtual router 3 (i.e. to the whole backup routers). Meanwhile, router 3-2, which was not assigned as the master router, monitors an advertisement packet to confirm that the master router 3-1 is working. If an advertisement packet is not received for a predetermined period, router 3-1 substitutes for the master router. In this case, when there are a plurality of backup routers, a router having the highest priority of all routers functions as the master router. The remainder routers continue to be backup routers to monitor the master router.

Nothing in the foregoing paragraphs teaches or suggests that the data plane of router 3-1 is logically extended to router 3-2. Furthermore, nothing teaches or suggests that VRRP provides such a logical extension of router 3-1’s data plane to router 3-2.

Accordingly, the cited art fails to teach and suggest “a virtual switch link protocol for logically extending a data plane of the master distribution switch chassis to that of the slave distribution switch chassis,” as recited in claim 1.

For at least the foregoing reason, claim 1 is patentable over the cited art, as are dependent claims 4-6, and 8-11. Claims 15-22 and 29 are patentable over the cited art for at least the reasons set forth above with respect to claim 14.

Claim 25 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya in view of Goodrum et al. (USPN 5,822,512) (“Goodrum”). Applicants respectfully traverse this rejection for at least the reasons set forth above with respect to claim 14.

Claims 3, 7 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya in view of Walsh and further in view of Goodrum. Applicants respectfully traverse this rejection for at least the reasons set forth above with respect to claim 1.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is invited to telephone the undersigned at 512-439-5087.

Applicants hereby petition for a two-month extension of time pursuant to 37 C.F.R. § 1.136(a). If any additional extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicants hereby petition for such extensions. Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

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